
Global experiences on managing disaster risk - rethinking New Zealand's policy approach

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Motu Public Policy Seminar

Managing disaster risk in NZ

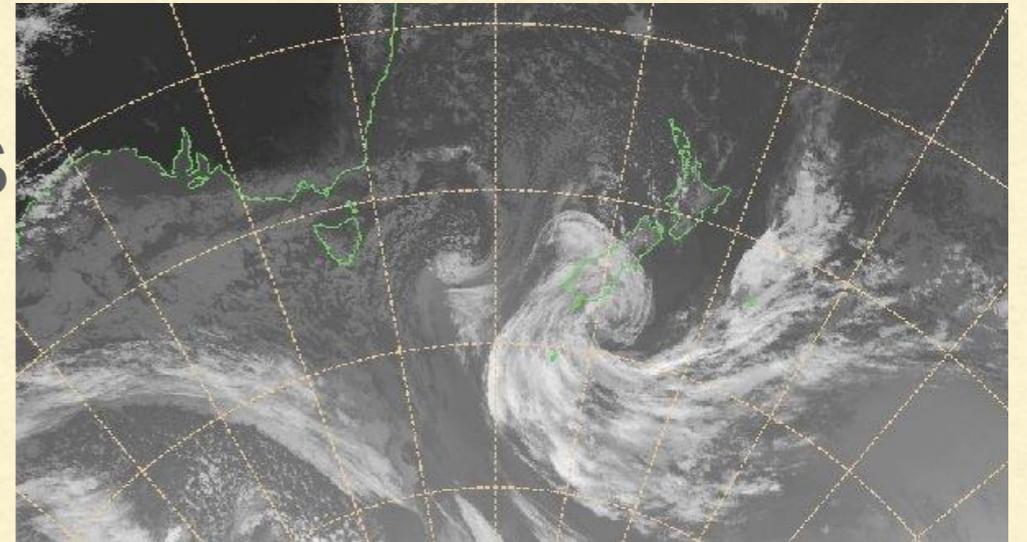
▶ **Exposure** to natural hazards

▶ What it **costs** us

▶ Altering our **focus** to meet a critical challenge

▶ Ensuring **risk-informed** investment

▶ Strengthening our **risk governance**



Refocus...

How to manage the risk?

(and not just the disaster)

Need to change paradigm of disasters as 'events' which

- ▶ emphasises hazard assessment, preparedness, emergency management and recovery
- ▶ leads to under-investment in risk reduction

Policy objective

Reduce risk of disasters

ie: prevention

Disaster risk (as defined by UN)

“The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society, or a community in a specified period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity”

Risk arises from

- ▶ Presence of **hazards**
- ▶ **Exposure** of population/assets to hazards
- ▶ **Vulnerability** of population/assets to hazards

Sendai Framework 2015

Goal: **prevent new and reduce existing disaster risk** through measures that

- ▶ prevent and reduce hazard exposure and vulnerability to disaster
- ▶ increase preparedness for response and recovery
- ▶ strengthen resilience

Sendai Framework Priorities

1. Understanding disaster risk
2. Strengthening disaster risk governance to manage DR
3. Investing in DRR for resilience
4. Enhancing preparedness for response and recovery

DRM means addressing drivers of risk by

- ▶ reducing existing levels of risk (“corrective”)
- ▶ avoiding risk creation (“prospective”)
- ▶ managing residual risk (“compensatory”)



**What is the (public and private) cost of
NZ's disaster loss and damage?**

Global losses = US\$314B pa
(UNISDR 2015)

from earthquake, tsunami, cyclone, flood
- in built environment

Plus?

drought, wildfire, landslides, etc...

Plus?

losses in rural/agricultural sector

**Global impact on wellbeing
measured by consumption loss**

= US\$520B pa

(World Bank)

**42 million Human Life Years
lost annually**

(Prof. Ilan Noy - GAR15)

Canterbury earthquakes 2010-2011

- ▶ **185 lives lost**
- ▶ **NZ\$40B** to rebuild
- ▶ **6+ years** disruption and stress

Leaky home 'industrial disaster'

- ▶ **NZ\$11B**
(2009 PriceWaterhouseCooper)

Kaikoura earthquakes (2016)

- ▶ **NZ\$3-10B** direct costs
- ▶ +\$? reinstatement of utilities/public services
- ▶ +\$? damaged road/rail interrupting supply
- ▶ +\$? small business and farm losses

Flood and Drought

Extensive risks

- ie smaller-scale, localised, frequent events

multiply \$\$s

‘What gets measured, gets managed’

Sendai Priorities and Targets

- ▶ New global indicators (output based)
- ▶ Obligation on NZ to report
- ▶ Disaggregated and systematic reporting
- ▶ Redesign national data collection and reporting systems

Country reporting on 'global indicators'

[UN Sendai Framework]

A. Mortality

B. Affected people

C. Direct economic loss re GDP

D. Critical infrastructure and essential services

E. National DRR strategies

F. Cooperation for developing countries

G. Multi-hazard early warning systems, access to risk information, assessments

Understanding risk requires

- ▶ Risk assessment
- ▶ Access to risk information
- ▶ National database
- ▶ Standardised methodology, comparable data
- ▶ Enable risk modelling of future losses

[Priority 1, Sendai Framework]

Need a national disaster loss database

- ▶ Integrated, comparable
- ▶ Systematic collection
- ▶ Neutral data host
- ▶ Multi-hazard, multi-sector
- ▶ Leverage international models
- ▶ Enables risk modelling of future losses

Need risk-informed investment, because

- ▶ Capital flowing into hazard-prone areas
- ▶ Exposed economic assets
- ▶ Mis-pricing of risk - risk generating behaviour, accumulating risks
- ▶ Government incentives to attract investment
- ▶ Disaster risk missing from forecasts, indices

Business as a full partner

- ▶ Cities 80% private capital
- ▶ Infrastructure/utilities interdependency
- ▶ Business interruption costs, impact on global supply chains
- ▶ Make DRR visible in the boardroom
- ▶ Co-benefits of increasing resilience, competitiveness, and sustainability

Strengthening disaster risk governance

- ▶ vision
- ▶ principles
- ▶ policy framework
- ▶ mainstreaming
- ▶ multi-hazard, multi-sector
- ▶ national strategy
- ▶ local plans
- ▶ legislative coherence
- ▶ whole-of-government

Strengthening disaster risk governance

- ▶ visibility
- ▶ compliance
- ▶ reporting
- ▶ oversight
- ▶ public engagement

- ▶ coordination
- ▶ multi-stakeholder
- ▶ financing
- ▶ NZ-inc target
- ▶ leadership

[Priority 1, Sendai Framework]

Opportunity = anticipatory risk approach

to:

reduce disaster losses

develop more sustainably

mitigate and adapt to climate change

and build resilience